

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/185,663A

DATE: 03/02/2001
TIME: 12:36:04

Input Set : A:\Bang Application 09185663 Sequence Listing.txt
Output Set: N:\CRF3\03022001\I185663A.raw

ENTERED

3 <110> APPLICANT: BANG, Nils U.
4 BECKMANN, Robert J.
5 JASKUNAS, S. Richard
6 LAI, Mei-Huei T.
7 LITTLE, Shelia P.
8 LONG, George L.
9 SANTERRE, Robert F.
11 <120> TITLE OF INVENTION: Vectors and Compounds for Expression of Human Protein C
13 <130> FILE REFERENCE: 008439-016
15 <140> CURRENT APPLICATION NUMBER: US 09/185,663A
16 <141> CURRENT FILING DATE: 1998-11-04
18 <150> PRIOR APPLICATION NUMBER: US 699,967
19 <151> PRIOR FILING DATE: 1985-02-08
21 <160> NUMBER OF SEQ ID NOS: 7
23 <170> SOFTWARE: PatentIn Ver. 2.0
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 1260
27 <212> TYPE: DNA
28 <213> ORGANISM: Homo sapiens
30 <400> SEQUENCE: 1
31 gccaaactcct tcttgaggga gctccgtcac agcagcctgg agcgggagtg catagaggag 60
33 a*cgtagactt cgaggaggcc aaggaaattt tccaaaaatg tggatgacac actggccttc 120
35 tgggtccaagc acgtcgacgg tgaccagtgc ttggtcttgc ccttgaggca cccgtgcgcc 180
37 agcctgtgct gcgggcacgg acgtgcacac gacggcatcg gcagcttcag ctgcgactgc 240
39 cgcagcggct gggaggggcg cttctgccag cgcgaggtga gcttcctcaa ttgctogctg 300
41 gacaacggcg gctgcacgca ttactgccta gaggaggtgg gctggcgggc ctgtagctgt 360
43 ggcgctggct acaagctggg ggacgacctc ctgcagtgtc accccgcagt gaagttccct 420
45 tgtgggagcg cctggaagcg gatggagaag aagcgagtc acctgaaacg agacacagaa 480
47 gaccaagaag accaagttag tccgcggctc attgatggga agatgaccag gcggggagag 540
49 agccctggc aggtggctct gctggactca aagaagaagc tggcctgcgg ggcagtgtct 600
51 atccaccct cctgggtgct gacagcggcc cactgcatgg atgagtccaa gaagctcctt 660
53 gtcaggcttg gagagtatga cctgcggcgc tgggagaagt gggagctgga cctggacatc 720
55 aaggaggtct tgcgccacc ccaactacagc aagagcacca ccgacaatga catcgcaactg 780
57 ctgcacctgg cccagccgcg caccctctcg cagaccatag tgcccatctg cctcccgac 840
59 agcggccttg cagagcgaga gctcaatcag gccggccagg agaccctcgt gacgggctgg 900
61 jsgtaccaca gcagccgaga gaaggaggcc aagagaaacc gcaccttcgt cctcaacttc 960
63 atcaagattc ccgtgggtccc gcacaatgag tgcagcgagg tcatgagcaa catggtgtct 1020
65 gagaacatgc tgtgtgcggg catctcggg gaccggcagg atgcctgcga gggcgacagt 1080
67 gggggggcca tggctgcctc cttccacggc acctgggttc tggtgggcct ggtgagctgg 1140
69 ggtgagggt gtgggtcctc tcacaactac ggcgtttaca ccaaagtcag ccgctacctc 1200
71 gactggatcc atgggcacat cagagacaag gaagccccc agaagagctg ggcaccttag 1260
74 <210> SEQ ID NO: 2
75 <211> LENGTH: 1386
76 <212> TYPE: DNA
77 <213> ORGANISM: Homo sapiens
79 <400> SEQUENCE: 2
80 atgtggcagc tcacaagcct cctgctgttc gtggccacct ggggaatttc cggcacacca 60

RAW SEQUENCE LISTING

DATE: 03/02/2001

PATENT APPLICATION: US/09/185,663A

TIME: 12:36:04

Input Set : A:\Bang Application 09185663 Sequence Listing.txt

Output Set: N:\CRF3\03022001\I185663A.raw

```

82 gctcctcttg actcagtgtt ctccagcagc gagcgtgccc accaggtgct gcggatccgc 120
84 aaacgtgcc aactccttct ggaggagctc cgtcacagca gcctggagcg ggagtgcata 180
86 gaggagatct gtgacttcga ggaggccaag gaaattttcc aaaatgtgga tgacacactg 240
88 gccttcttgt ccaagcacgt cgacggtgac cagtgtcttg tcttgccctt ggagcaccgc 300
90 tgcgccagcc tgtgctgctg gcacggcacg tgcacgacg gcacgagcag cttcagctgc 360
92 gactgccgca gcggctggga gggccgcttc tgccagcgcg aggtgagctt cctcaattgc 420
94 tcgctggaca acggcggtct caccgattac tgcctagagg aggtgggctg gcggcgctgt 480
96 agctgtgctg ctggctacaa gctgggggac gacctcctgc agtgtcacc cgagtggaag 540
98 ttcccttgtg ggaggccctg gaagcggatg gagaagaagc gcagtcacct gaaacgagac 600
100 acagaagacc aagaagacca agtagatccg cggctcattg atgggaagat gaccaggcgg 660
102 ggagacagcc cctggcaggt ggtcctgctg gactcaaaga agaagctggc ctgcggggca 720
104 gtgctcatcc acccctcctg ggtgctgaca gcggcccaact gcattgatga gtccaagaag 780
106 ctctttgtca ggcttggaga gtatgacctg cggcgctggg agaagtggga gctggacctg 840
108 gacatcaagg aggtcttctg ccacccaac tacagcaaga gcaccaccga caatgacatc 900
110 gcaactgctg acctggccca gcccgccacc ctctcgaga ccattagtgc catctgcctc 960
112 ccggacagcg gccttgcaga gcgcgagctc aatcaggccg gccaggagac cctcgtgacg 1020
114 ggctggggct accacagcag ccgagagaag gaggccaaga gaaaccgcac ctctgtcctc 1080
116 aacttcatca agattcccgt ggtcccgcac aatgagtgca gcgaggtcat gagcaacatg 1140
118 gtgtctgaga acatgctgtg tgcgggcatc ctcggggacc gccaggatgc ctgagagggc 1200
120 gacagtggg ggcccatggt cgcctccttc caccgacct ggttcttggg gggcctggtg 1260
122 agctgggggt agggctgtgg gctccttcac aactacggcg ttacaccaa agtcagccgc 1320
124 tacctcgact ggatccatgg gcacatcaga gacaaggaag cccccagaa gagctgggca 1380
126 ccttag 1386
129 <210> SEQ ID NO: 3
130 <211> LENGTH: 1386
131 <212> TYPE: DNA
132 <213> ORGANISM: Homo sapiens
134 <400> SEQUENCE: 3
135 atgtggcagc tcacaagcct cctgctgttc gtggccacct ggggaatttc cggcacacca 60
137 gctcctcttg actcagtgtt ctccagcagc gagcgtgccc accaggtgct gcggatccgc 120
139 aaacgtgcc aactccttct ggaggagctc cgtcacagca gcctggagcg ggagtgcata 180
141 gaggagatct gtgacttcga ggaggccaag gaaattttcc aaaatgtgga tgacacactg 240
143 gccttcttgt ccaagcacgt cgacggtgac cagtgtcttg tcttgccctt ggagcaccgc 300
145 tgcgccagcc tgtgctgctg gcacggcacg tgcacgacg gcacgagcag cttcagctgc 360
147 gactgccgca gcggctggga gggccgcttc tgccagcgcg aggtgagctt cctcaattgc 420
149 tcgctggaca acggcggtct caccgattac tgcctagagg aggtgggctg gcggcgctgt 480
151 agctgtgctg ctggctacaa gctgggggac gacctcctgc agtgtcacc cgagtggaag 540
153 ttcccttgtg ggaggccctg gaagcggatg gagaagaagc gcagtcacct gaaacgagac 600
155 acagaagacc aagaagacca agtagatccg cggctcattg atgggaagat gaccaggcgg 660
157 ggagacagcc cctggcaggt ggtcctgctg gactcaaaga agaagctggc ctgcggggca 720
159 gtgctcatcc acccctcctg ggtgctgaca gcggcccaact gcattgatga gtccaagaag 780
161 ctctttgtca ggcttggaga gtatgacctg cggcgctggg agaagtggga gctggacctg 840
163 gacatcaagg aggtcttctg ccacccaac tacagcaaga gcaccaccga caatgacatc 900
165 gcaactgctg acctggccca gcccgccacc ctctcgaga ccattagtgc catctgcctc 960
167 ccggacagcg gccttgcaga gcgcgagctc aatcaggccg gccaggagac cctcgtgacg 1020
169 ggctggggct accacagcag ccgagagaag gaggccaaga gaaaccgcac ctctgtcctc 1080
171 aacttcatca agattcccgt ggtcccgcac aatgagtgca gcgaggtcat gagcaacatg 1140
173 gtgtctgaga acatgctgtg tgcgggcatc ctcggggacc gccaggatgc ctgagagggc 1200
175 gacagtgggg ggcccatggt cgcctccttc caccgacct ggttcttggg gggcctggtg 1260

```

RAW SEQUENCE LISTING

DATE: 03/02/2001

PATENT APPLICATION: US/09/185,663A

TIME: 12:36:04

Input Set : A:\Bang Application 09185663 Sequence Listing.txt

Output Set: N:\CRF3\03022001\I185663A.raw

```

177 agctgggggtg agggctgtgg gctccttcac aactacggcg tttacaccaa agtcagccgc 1320
179 tacctcgact ggatccatgg gcacatcaga gacaaggaag cccccagaa gagctgggca 1380
181 ccttag 1386
184 <210> SEQ ID NO: 4
185 <211> LENGTH: 1290
186 <212> TYPE: DNA
187 <213> ORGANISM: Homo sapiens
189 <400> SEQUENCE: 4
190 gccaccagg tgctgcggat ccgcaaacgt gccaaactcct tcctggagga gtcctgcac 60
192 agcagccttg agcgggagtg catagaggag atctgtgact tcgaggaggc caaggaaatt 120
194 ttccaaaatg tggatgacac actggccttc tgggtccaagc acgtcgacgg tgaccagtgc 180
196 ttggtcttgc ccttgagca cccgtgcgcc agcctgtgct gcgggcacgg cacgtgcac 240
198 gacggcatcg gcagcttcag ctgcgactgc cgcagcggct gggaggggcg cttctgccag 300
200 cgcgaggtga gcttcctcaa ttgctcgtcg gacaacggcg gctgcacgca ttactgccta 360
202 gaggaggttg gctggcggcg ctgtagctgt gcgcctggct acaagctggg ggacgacctc 420
204 ctgcagtgtc acccgcagtg gaagtccct tgtggaggc cctggaagcg gatggagaag 480
206 aagcgcagtc acctgaaacg agacacagaa gaccaagaag accaagtaga tccgcggctc 540
208 attgatggga agatgaccag gcggggagac agcccttggc aggtggctct gctggactca 600
210 aagaagaagc tggcctgcgg ggcagtgtct atccaccct cctgggtgct gacagcggcc 660
212 cactgcatgg atgactcaa gaagctcctt gtcaggcttg gagagtatga cctgcggcgc 720
214 tgggagaagt gggagctgga cctggacatc aaggaggtct tcgtccaccc caactacagc 780
216 aagagcacca ccgacaatga catgcactg ctgcacctgg ccagcccgcc caccctctcg 840
218 cagaccatag tgccatctg cctcccgac agcggccttg cagagcgcga gctcaatcag 900
220 gccggccagg agaccctcgt gacgggctgg ggctaccaca gcagccgaga gaaggaggcc 960
222 aagagaaacc gcacctcgt cctcaacttc atcaagattc ccgtggctcc gcacaaagag 1020
224 tgcagcgagg tcatgagcaa catggtgtct gagaacatgc tgtgtgcggg catcctcggg 1080
226 gaccggcagg atgcctgcga gggcgacagt ggggggcoca tggtcgcctc cttccacggc 1140
228 acctggttcc tgggtggcct ggtgagctgg ggtgagggt gtgggtcct tcacaactac 1200
230 ggcgtttaca ccaaagtcag ccgtacctc gactggatcc atgggcacat cagagacaag 1260
232 gaagccccc agaagagctg ggcaccttag 1290
235 <210> SEQ ID NO: 5
236 <211> LENGTH: 1287
237 <212> TYPE: DNA
238 <213> ORGANISM: Homo sapiens
240 <400> SEQUENCE: 5
241 caccaggtgc tgcggatccg caaacgtgcc aactccttcc tggaggagct ccgtcacagc 60
243 agcctggagc gggagtgcac agaggagatc tgtgacttcg aggaggccaa ggaaattttc 120
245 caaaatgttg atgacacact ggcttcttgg tccaagcacg tcgacgggtga ccagtgttg 180
247 gtcttgccct tggagacccc gtgcgccagc ctgtgctgcg ggcacggcac gtgcatcgac 240
249 ggcacgcgca gcttcagctg cgaactgccg agcggctggg agggccgctt ctgccagcgc 300
251 gaggtgagct tcctcaattg ctgcgtggac aacggcggct gcacgcatta ctgcctagag 360
253 gaggtgggct ggcggcgctg tagctgtgcg cctggctaca agctggggga cgacctcctg 420
255 cagtgtcacc ccgcagtga .gttccttgtt gggaggccct ggaagcggat ggagaagaag 480
257 cgcagtacc tgaaacgaga cacagaagac caagaagacc aagtagatcc gcggctcatt 540
259 gatgggaaga tgaccaggcg gggagacagc ccttgccagg tggctctgct ggactcaaag 600
261 aagaagctgg cctgcgggc agtgctcct caccctcctt ggtgtctgac agcggcccac 660
263 tgcattgatg agtccaagaa gctccttgtc aggccttgag agtatgacct gcggcgctgg 720
265 gagaagtggg agctggacct ggacatcaag gaggtcttcg tccaccccaa ctacagcaag 780
267 agcaccaccg acaatgacat cgcactgctg cacctggccc agcccgccac cctctcgag 840

```

RAW SEQUENCE LISTING

DATE: 03/02/2001

PATENT APPLICATION: US/09/185,663A

TIME: 12:36:04

Input Set : A:\Bang Application 09185663 Sequence Listing.txt

Output Set: N:\CRF3\03022001\I185663A.raw

```

269 accatagtgc ccatctgcct cccggacagc ggccttgagc agcgcgagct caatcaggcc 900
271 ggccaggaga ccctcgtgac gggctggggc taccacagca gccgagagaa ggaggccaag 960
273 agaaaccgca ccttcgtcct caacttcac aagattcccg tggccccgca caatgagtgc 1020
275 agcgagggtca tgagcaacat ggtgtctgag aacatgctgt gtgcgggcat cctcggggac 1080
277 cggcaggatg cctgcgaggg cgacagtggg gggcccatgg tcgcctcctt ccacggcacc 1140
279 tggttccttg tgggcctggt gagctggggg gagggtgtgt ggctccttca caactacggc 1200
281 gtttacacca aagtcagccg ctacctcgac tggatccatg ggcacatcag agacaaggaa 1260
283 gccccccaga agagctgggc accttag 1287

```

286 <210> SEQ ID NO: 6

287 <211> LENGTH: 465

288 <212> TYPE: DNA

289 <213> ORGANISM: Homo sapiens

291 <400> SEQUENCE: 6

```

292 gccaaactcct tcttgaggga gctccgtcac agcagcctgg agcgggagtg catagaggag 60
294 atctgtgact tcgaggaggc caaggaaatt ttccaaaatg tggatgacac actggccttc 120
296 tggccaagc acgtcgacgg tgaccagtgc ttggtcttgc ccttgaggca cccgtgcgcc 180
298 agcctgtgct gcgggcacgg cacgtgcacg gacggcatcg gcagcttcag ctgcgactgc 240
300 cgcagcggtt gggagggccg cttctgccag cgcgaggtga gcttcctcaa ttgctegctg 300
302 gacaacggcg gctgcacgca ttactgccta gaggaggtgg gctggcggcg ctgtagctgt 360
304 gcgcctggct acaagctggg ggacgacctc ctgcagtgtc acccgcagtg gaagttccct 420
306 tgtgggaggc cctggaagcg gatggagaag aagcgcagtc acctg 465

```

309 <210> SEQ ID NO: 7

310 <211> LENGTH: 155

311 <212> TYPE: PRT

312 <213> ORGANISM: Homo sapiens

314 <400> SEQUENCE: 7

```

316 Ala Asn Ser Phe Leu Glu Glu Leu Arg His Ser Ser Leu Glu Arg Glu
317 1 5 10 15
319 Cys Ile Glu Glu Ile Cys Asp Phe Glu Glu Ala Lys Glu Ile Phe Gln
320 20 25 30
322 Asn Val Asp Asp Thr Leu Ala Phe Trp Ser Lys His Val Asp Gly Asp
323 35 40 45
325 Gln Cys Leu Val Leu Pro Leu Glu His Pro Cys Ala Ser Leu Cys Cys
326 50 55 60
328 Gly His Gly Thr Cys Ile Asp Gly Ile Gly Ser Phe Ser Cys Asp Cys
329 65 70 75 80
331 Arg Ser Gly Trp Glu Gly Arg Phe Cys Gln Arg Glu Val Ser Phe Leu
332 85 90 95
334 Asn Cys Ser Leu Asp Asn Gly Gly Cys Thr His Tyr Cys Leu Glu Glu
335 100 105 110
337 Val Gly Trp Arg Arg Cys Ser Cys Ala Pro Gly Tyr Lys Leu Gly Asp
338 115 120 125
340 Asp Leu Leu Gln Cys His Pro Ala Val Lys Phe Pro Cys Gly Arg Pro
341 130 135 140
343 Trp Lys Arg Met Glu Lys Lys Arg Ser His Leu
344 145 150 155

```

VERIFICATION SUMMARY

DATE: 03/02/2001

PATENT APPLICATION: US/09/185,663A

TIME: 12:36:05

Input Set : A:\Bang Application 09185663 Sequence Listing.txt

Output Set: N:\CRF3\03022001\I185663A.raw